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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,311	12/02/2003	James Lee Hendrix	TWI-23210	3113

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EXAMINER

VALENTIN, JUAN D

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H-10

Office Action Summary

Application No.

10/726,311

Applicant(s)

HENDRIX ET AL.

Examiner

Juan D. Valentin II

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/02/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-4 & 11 rejected under 35 U.S.C. 102(e) as being anticipated by Schwarz (USPN '250 B2, hereinafter Ref. A).

Claims 1 & 11

Ref. A discloses optically inspecting and evaluating a sample, the method comprising the steps of repeatedly illuminating a substantial portion of the sample at a succession of spectral ranges (col. 6, lines 23-25 & col. 10, lines 18-39), gathering the illumination reflected by the substantial portion of the sample at each spectral range, and analyzing the gathered illumination to generate a measurement describing a physical property of the sample (Fig. 1, col. 5, lines 5-63, col. 7, line 61-col. 8, line 3, & col. 9, lines 23-44).

Claim 2

Ref. A as applied above further discloses generating a probe beam using a broad-spectrum illumination source and colorizing the probe beam by passing it through a selected

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portion of a variable color filter (col. 10, lines 18-39, col. 11, line 23-col. 12, line 23, col. 1, lines 8-25, col. 14, line 16-col. 16, line 7).

Claim 3

Ref. A as applied above further discloses illuminating the sample by enabling one of a series of illumination sources where each illumination source produces light within a respective spectral range (col. 10, lines 18-39, col. 1, lines 8-25, col. 14, line 16-col. 16, line 7).

Claim 4

Ref. A as applied above further discloses gathering the illumination reflected by the substantial portion of the sample is performed using a series of optical systems, each configured to gather illumination reflected by a respective sample portion (Fig. 1, col. 3, line 62-col. 4, line 31).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5-6 rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarz (USPN '404 B2, hereinafter Ref. B).

Claims 5 & 6

Ref. B in conjunction with Figs. 1 & 2, discloses a plurality of individual light sources 2-8 each emitting light at a different spectral range (col. 16, line 14-col. 17, line 14 & col. 21, lines 34-59), a plurality of optical fibers each associated with a respective light source (col. 23, lines 18-45), means (ref. 17 Fig. 9B) for selectively transmitting light emitted from one of the fibers to illuminate a large area of the sample, a detector 16 having an array of elements configured to measure light reflected from the sample, the elements generating output signals that can be mapped to particular measurement regions on the sample, and a processor for evaluating characteristics of the sample based on the output signals (col. 18, line 14-col. 19, line 49). Ref. B further discloses wherein the entire sample is illuminated (col. 19, lines 43-49).

Ref. B discloses the claimed invention except for the use of optical fibers in between the light sources and the sample. It would have been obvious to one having ordinary skill in the art at the time of the claimed invention was made to use optical fibers on the illumination end of the measurement system as well as on the detection end for the purposes of selectively controlling the illumination on a specific region of the sample under test (col. 23, lines 18-45), since it has been held that a mere reversal of the essential working elements of a device involves only routine skill in the art.

Claim 12

Ref B. in conjunction with Figs. 1 & 2 discloses an illumination system for illuminating a large area of the sample (col. 16, line 14-col. 17, line 14 & col. 21, lines 34-59), a dense array of micro lenses, each lens configured to gather light reflected by a particular measurement regions on the sample (col. 16, line 62-col. 17, line 14), a series of detectors each paired with a

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respective micro lens and measurement region, each detector creating an output signal corresponding to its measurement region, and a processor for evaluating characteristics of the sample based on the output signals (col. 17, line 15-col. 18, line 62).

It is the position of the Office that even though Ref. B does not specifically disclose an array of micro-lenses, it does outline the importance of controlling the reflected light from each specific light source using “at least one lens of at least one light source” (col. 18, lines 30-34) to selectively focus light onto LCD iris (Fig. 1, ref. 17) that functionally accomplishes the same achievements as applicants claimed micro lens array. In light of the applicants disclosure, there is no critically distinguishing micro lens feature in the applicants disclosure that exemplifies novelty over prior art disclosure. Therefore producing the same results as the applicants limitation, therefore the Ref. B reads on applicants claimed limitation.

Claim 13

Ref. B discloses the claimed invention except for the use of optical fibers in between the light sources and the sample. It would have been obvious to one having ordinary skill in the art at the time of the claimed invention was made to use optical fibers on the illumination end of the measurement system as well as on the detection end for the purposes of selectively controlling the illumination on a specific region of the sample under test (col. 23, lines 18-45), since it has been held that a mere reversal of the essential working elements of a device involves only routine skill in the art.

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3. Claims 7-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Ref. A in view of Ref. B.

Claims 7 & 9-10

Ref. A discloses a broadband light source, a filter for selectively transmitting a narrow spectral range of light, wherein the transmitted light is used to illuminate a large area of a sample (col. 6, lines 23-25 & col. 10, lines 35-39, col. 11, line 23-col. 12, line 23-11, col. 14, lines 16-25). Ref. A further discloses a detector having an array of elements configured to measure light reflected from the sample, a processor for evaluating characteristics of the sample based on the output signals (Fig. 1, col. 5, lines 5-63, col. 7, line 61-col. 8, line 3, & col. 9, lines 23-44).

Ref. A substantially teaches the claimed invention except that it fails to show generating output signals that can be mapped to particular measurement regions on the sample. Ref. B shows that it is known to provide generating output signals that can be mapped to particular rectangular (claim 10) measurement regions on the sample and wherein the entire sample (claim 9) is illuminated (col. 18, line 14-col. 19, line 49) for a device for determining the properties of a reflective surface. It would have been obvious to someone of ordinary skill in the art to combine the device of Ref. A with the surface mapping of Ref. B for the purposes of providing an analysis with regard to the locational spatial distribution of material inclusions across a measurement surface (Ref. B, col. 19, lines 46-49).

Claim 8

Ref. A as applied above further discloses a means for adjusting the filter to transmit successive, different spectral ranges of light (col. 10, lines 18-39, col. 11, line 23-col. 12, line 23, col. 1, lines 8-25, col. 14, line 16-col. 16, line 7).

Claim 14

Ref. B substantially teaches the claimed invention except that it fails to show a broadband light source, a filter for selectively transmitting a narrow spectral range of light, wherein the transmitted light is used to illuminate a large area of a sample. Ref. A shows that it is known to provide a broadband light source, a filter for selectively transmitting a narrow spectral range of light, wherein the transmitted light is used to illuminate a large area of a sample (col. 6, lines 23-25 & col. 10, lines 35-39, col. 11, line 23-col. 12, line 23, col. 14, lines 16-25) for a device for determining the qualities of a surface. It would have been obvious to someone of ordinary skill in the art to combine the device of Ref. B with multiple illuminations filtering of Ref. A for the purposes of providing determination of a spectral distribution of intensity to the light reflected from the ample surface (Ref. A, col. 11, lines 19-22).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan D. Valentin II whose telephone number is (571) 272-2433. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Juan D Valentin II
Examiner 2877
JDV
May 1, 2006



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